



	(1)	(10)	(20)	(30)	(40)
	230	240	250	260	270
	*	+	+	+	+
	x	x	x	xx	xxx
	xx			xx	xxx
	xx			xxx	xx
	xx			xxx	xx
* CH60_ECOLI_190	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
* CH60_SALTI_190	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
* S56371_191	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
CH60_LEPIN_190	MKDLIHILEKV	MKDLIHILEKV	AKAGKPLVI	ISEVEGEALATLVVNTLRKTI	AKAGKPLVI
S47530_191	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDIDSEALATLVVNTLRKTI	AKAGKPLLI
* LPNHTPBG_190	IREMLSVLEGV	IREMLSVLEGV	AKSGRPLLI	IAEDVEGEALATLVVNTMRGIV	AKSGRPLLI
* CH60_ACTAC_189	IREMLPVLEGV	IREMLPVLEGV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
JC4519_191	IREMLPVLEGV	IREMLPVLEGV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
CH60_BRUAB_191	LOALLPVLEAV	LOALLPVLEAV	VQTSKPLLI	IAEDVEGEALATLVVNTMRGIV	VQTSKPLLI
* CH60_HAEIN_191	IRELLPVLEGV	IRELLPVLEGV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
# CH60_CAUCR_190	LOPLPVLEAV	LOPLPVLEAV	QSGRPLLI	IAEDVEGEALATLVVNTMRGIV	QSGRPLLI
* CH60_AMOPS_190	IRDMLSVLEAV	IRDMLSVLEAV	AKSGRPLLI	IAEDVEGEALATLVVNTMRGIV	AKSGRPLLI
* CH60_HAEDU_191	IRELLPVLEAV	IRELLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
CH61_RHIME_191	LOAMLPVLEAV	LOAMLPVLEAV	VQTKRPLLI	IAEDVEGEALATLVVNTMRGIV	VQTKRPLLI
* CH60_LEGMI_190	IRDMLSVLEAV	IRDMLSVLEAV	AKSGPSLLI	IAEDVEGEALATLVVNTMRGIV	AKSGPSLLI
* CH60_YEREN_191	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
CH63_BRAJA_190	INELLPVLEAV	INELLPVLEAV	VQTKRPLVI	IAEDVEGEALATLVVNTMRGIV	VQTKRPLVI
CH60_PORGI_191	IREMLPVLEAV	IREMLPVLEAV	VQTKRPLLI	IAEDNDSEALPTLVVNTMRGIV	VQTKRPLLI
* S52901_191	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
* S26423_191	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
RSU373691_191	LOPMVPVLEAV	LOPMVPVLEAV	IOSOKPLLI	IAEDVEGEALATLVVNTMRGIV	IOSOKPLLI
CH62_BRAJA_190	INELLPVLEAV	INELLPVLEAV	VQSGKPLVI	IAEDVEGEALATLVVNTMRGIV	VQSGKPLVI
CH60_ACYPS_191	IREMLPVLEAV	IREMLPVLEAV	AKSGKPLLI	ISEDLGEALATLVVNTMRGIV	AKSGKPLLI
CH63_RHIME_191	LOAMLPVLEAV	LOAMLPVLEAV	VQSGKPLLI	IAEDVEGEALATLVVNTMRGIV	VQSGKPLLI
* YEPHSPCRPI_191	IREMLPVLEAV	IREMLPVLEAV	AKAGKPLLI	IAEDVEGEALATLVVNTMRGIV	AKAGKPLLI
CH60_BORPE_191	IRDLLPVLEAV	IRDLLPVLEAV	AKSSRPLLI	IAEDVEGEALATLVVNTMRGIV	AKSSRPLLI

FIG. 9(a)



BRUGRO1_189 LOALLPVEAV.....VQTSKPLIIAEDVEGERLATLVNKLRGGL
*CH60_PSEAE_191 IREMLPVEAV.....AKAGRPPLIIAEDVEGEALATLVNMMRGIV
CH60_BARBA_190 LOSLLPVEAV.....AOSGKPLIIAEDVEGEALATLVNKLRGGL
BAOB63A_191 LOSLLPVEAV.....VOSGKPLIIAEDVEGEALATLVNKLRGGL
CH60_BACST_189 IOEILPVEAV.....VOQGRPLIIAEDVEGEALATLVNKLRGGL
CH60_BACSU_188 IOEILPVEAV.....VQOGKPLIIAEDVEGEALATLVNKLRGGL
CH60_AGRIV_191 LOAML PVEAV.....VOTGKPLVIIAEDVEGERLATLVNKLRGGL
B369I7_191 LOAML PVEAV.....VOTGKPLVIIAEDVEGERLATLVNKLRGGL
*PAUI7072_191 IREMLPVEAV.....AKAGRPPLIIAEDVEGEALATLVNMMRGIV
CH60_RHILV_191 LOSMLPVEAV.....VOTGKPLIIAEDVEGEALATLVNKLRGGL
CH61_STRCO_187 IADLLPVEAV.....OANASKPLIIAEDLEGEALSTLVNKLRGGL
CH60_COXBU_191 IRELIPLENV.....AKSGRPPLIIAEDIEGEALATLVNKLRGGL
CH62_RHIME_191 LOAMP PVEAV.....IOSGKPLIIAEDVEGEALATLVNKLRGGL
PSEGR0ESL1_191 IREMLPVEAV.....AKAGRPPLIIAEDVEGEALATLVNMMRGIV
CH61_SYNY3_189 VODLPVEAV.....AROGKPLIIAEDIEKEALATLVNKLRGGL
CH60_CLOM_189 IQDILPVEAV.....VQOGKPLVIIAEDVEGEALATLVNKLRGGL
#CH60_PSEPU_191 SRAASTERA.....SAGRPPLIIAEDVEGEALATLVNMMRGIV
CH60_SYNP7_190 VQDLVPVEAV.....ARAGRPPLIIAEDIEKEALATLVNKLRGGL
CH60_GALSU_190 VQODLPVEAV.....AKTKRPPLIIAEDIEKEALATLVNKLRGGL
CH60_ZYMO_190 LOSILPVEAV.....VOSGRPLIIAEDIEGEALATLVNKLRGGL
JC2564_191 LOSILPVEAV.....VOSGRPLIIAEDIEGEALATLVNKLRGGL
*CH60_CHRVI_191 IRDLPVEAV.....AKAGRPPLIIAEDVEGEALATLVNKLRGGL
CH60_MYCTU_189 VKDLPVEAV.....IGAGRPPLIIAEDVEGEALSTLVNKLRGGL
CH60_NEIME_191 IRDLPVEAV.....AKASRPPLIIAENVEGEALATLVNKLRGGL
CH60_TREPA_189 MKDLPVEAV.....AOTGRPLIIAEDVEGEALATLVNKLRGGL
CH60_HELPY_190 MKDLPVEAV.....MKEGKPLIIAEDIEGEALSTLVNKLRGGL
CH60_NEIGO_191 IRDLPVEAV.....AKASRPPLIIAEDVEGEALATLVNKLRGGL
CH61_CUCMA_222 INAVVVELEA.....LKKORPLIIAEDVEGEALSTLVNKLRGGL
CH60_MYCPA_189 VKDLPVEAV.....IOAGKPLIIAEDVEGEALSTLVNKLRGGL
MPUI5989_230 VKDLPVEAV.....IOAGKPLIIAEDVEGEALSTLVNKLRGGL

FIG. 9(b)



S26582_224 MHAUVKYLEMA.....LKKOKPLLIIVAEVSEALGTLIINKLRAGI
S40247_191 IRDLPLVLEOV.....AKASRPLLIIVAEVEGEALATLVVNNIRGVL
CH60_CLOAB_189 IOEILPBLEOI.....VOQSKLLIIVAEVEGEALATLVVNNIRGTF
CH60_NEIFL_191 IRDLPLVLEOV.....AKASRPLLIIVAEVEGEALATLVVNNIRGTF
*CH60_LEGPN_190 IREMLSVLEGV.....AKSGRPLLIIVAEVEGEALATLVVNNIRGIV
CH62_CUCMA_222 INSUVKYLELA.....LKRORPLLIIVSEDESDALATLVVNNIRGIV
CHTGROESLI_191 IKDFLPVLQOV.....AESGRPLLIIVAEIEGEALATLVVNNIRGIF
S40172_64 IKDFLPVLQOV.....AESGRPLLIIVAEIEGEALATLVVNNIRGIF
SYGROEL2_189 IODLIPTLERV.....ARSGRPLVIIVAEVEGEALATLVVNNIRGVL
CH60_CHLPS_191 IKDFLPVLQOV.....AESGRPLLIIVAEIEGEALATLVVNNIRGIF
CH62_STRAL_188 VKDLPLPLEKV.....MOSGRPLLIIVAEVEGEALSTLVVNNIRGTF
CH62_MYCLE_189 VKDLPLPLEKV.....IQAGKSLIIVAEVEGEALSTLVVNNIRGTF
MSGANTM_236 VKDLPLPLEKV.....IQAGKSLIIVAEVEGEALSTLVVNNIRGTF
CH60_BORBU_190 IKELPLPLEKV.....LGTNKPPLIIVAEIEGDALATLVVNNIRGAL
S26583_224 MHAUVKYLEMA.....LKKORPLLIIVAEVESEALGTLIINKLRAGI
A49209_190 IKELPLPLEKV.....LGTNKPPLIIVAEIEGDALATLVVNNIRGAL
M2ECPN60B_224 MHAUVKYLEMA.....LKKORPLLIIVAEVESEALGTLIINKLRAGI
CH60_THERP_189 IOELLPALEOV.....VOQGRPLLIIVAEVEGEALATLVVNNIRGTF
CH60_STAPR_188 FODILPBLEOV.....VOASRPILIVAEVEGEALATLVVNNIRGTF
CH60_LACIA_189 IOEILPBLEOI.....LKTNRPLLIIVADDVDGEALPTLVVNNIRKIGVF
CH61_STRAL_188 IODLLPBLEKVI.....QAGSKPLLIIVAEVEGEALSTLVVNNIRKIGTF
CH60_CHLPN_191 IKDFLPVLQOV.....AESGRPLLIIVAEIEGEALATLVVNNIRLAGF
M2ECPN60A_224 MHAUVKYLEMA.....LKKOKPLLIIVAEVSEALGTLIINKLRAGI
HECHSPAB1_190 MKDILPBLEKT.....MKEGRPLLIIVAEIEGEALPTLVVNNIRGVL
CH60_ARATH_221 INSIVKYLELA.....LKRORPLLIIVSEDESDALATLVVNNIRLAGI
CH60_MAIZE_224 MHAUVKYLEMA.....LKKOKPLLIIVAEVSEALGTLIINKLRAGI
CH60_CHLTR_190 IKDFLPVLQOV.....AESGRPLLIIVAEIEGEALATLVVNNIRGIF
CH60_STAU_189 FODILPBLEOV.....VOQNRPLLIIVAEVEGEALATLVVNNIRGTF
CH60_CLOPE_189 IODLLPBLEOI.....VOAGKRLIIVADDIEGEAMTTLVVNNIRGTF
HS60_YEAST_212 IODILPALEIS.....NOSRAPPLIIVAEVDGEALAAACILNNKLRGIV
CH60_PYRSA_217 VOELVPILHELI.....SKTSRPLLIIVAEVEKEALATLVVNNKLRGIV

FIG. 9(c)



CH60_EHRCH_191 IQPILPILENV.....ARSGRPLIIAEDVEGEALSTLVNKLKRGSL
CHTGR0E1_191 IKDFLPVLOQV.....AESGRPLIIAEDIVGEALATLVNKRIRGGE
CH60_THETH_188 VRELLPILEOV.....AQTGKPLIIAEDVEGEALATLVNKLKRGTL
TAU294831_189 VRELLPILEOV.....ROTKRPLIIAEDVEGEALATLVNKLKRGTL
CH60_RICTS_190 VOPLPVLEAV.....AHTGKPLVLIADVDGEALATLILNKLKSGI
SYCCPNC_189 IAEIVPVLEAV.....ARAGRPLIIAEDIEGEALATLVNKRARGVL
CPU308211_190 VODLPVPILEOV.....ARARKPLFI AEDIEKEALATLVNKLKRGNL
CH61_MYCLE_189 LPELLPMLEKV.....TESGKPLIIAEDLEGEALATLVNNSIRKTL
PSU21139_239 ARDLINILEDA.....IRSGFPVIIAEDIEGEALATLVNKLKRGSL
CH60_COWRU_191 IQPLLPILENI.....ARSGRPLIIAEDVEGEALSTLVNKLKRGSL
RUBB_BRANA_245 ARDLVGVLEDA.....IRGGYPILIIAEDIEGEALATLVNKLKRGSL
SCCPN60_144 ARDLINVLEEA.....IRGGYPILIIAEDIEGEALATLVNKLKRGSL
CH60_EHRI_153 IQPMVPLETEI.....VRSNRAVVI AEDVEGEALTSVLSKMRGSL
RUBB_ARATH_245 ARDLVGVLEDA.....IRGGYPILIIAEDIEGEALATLVNKLKRGTL
ATU49357_235 IKDIIPILEKT.....TOLRAPPLIIAEDVTGEALATLVNKLKRGVL
RUB1_BRANA_195 IKDIIPILEKT.....TOLRAPPLIIAEDVTGEALATLVNKLKRGVL
CH62_SYNY3_189 IAEIVPVLEAV.....ARAGRPLIIAEDIEGEALATLVNKRARGVL
RUBA_RICCO_178 IKDIIPILEKT.....TOLRAPPLIIAEDVTGEALATLVNKLKRGIV
CH60_ODOSI_190 VQODLPPILEQI.....TKTKRPLIIAEDVEKEALATLVNKLKRGIV
PSU21105_236 IKDIIPILEKT.....TOLRAPPLIIAEDVTGEALATLVNKLKRGIV
CH60_BRANA_224 LNSMVKVLELA.....LKSORSLLI AADLES DALAVLILNKLKRGIV
PMSAR2_105 IADLPVLETV.....OKSSSPVLIIAEEVDGEALATLVNKNRARGVL
RUB2_BRANA_234 IKDIIPILEKT.....TOLRAPPLIIAEDVTGEALATLVNKLKRGVL
CRECPN1A_75 ARDITILESA.....IRGNYPLLMAEEVEGEALATLVNKLKRGVL
P60_CRIGR_215 VQIVPALEIA.....NAHRKPLVIIAEDVDGEALSTLVNKLKRGVL
CRECPN1B_224 IRDIIPILEOV.....TRLNAPPLIIAEDVSGEALATLVNKLKRGVL
RUBA_WHEAT_191 IKEIIPILEQT.....TOLRCPLFI AEDITGEALATLVNKLKRGIT
B47292_189 LPDDLPLEKV.....AGTGKPLIIAEDVEGEALATLVNNAIRKTL
CELHSP60CP_206 VQDIVPALEIA.....NKLARPPLVIIAEDVDGEALTTLVNKLKRGVL
P60_HUMAN_215 IQSIVPALEIA.....NAHRKPLVIIAEDVDGEALSTLVNKLKRGVL
P60_MOUSE_215 VQIVPALEIA.....NAHRKPLVIIAEDVDGEALSTLVNKLKRGVL

FIG. 9(d)



P60 RAT_215 VQSVVPALTEIA.....NAHRKPLVIAEDVDGEALSTLVNRLKVG
A41931_215 VQSVVPALTEIA.....NAHRKPLVIAEDVDGEALSTLVNRLKVG
MMHSP60A_197 VQSVVPALTEIA.....NAHRKPLVIAEDVDGEALSTLVNRLKVG
CH63 HELVI_218 ASQVVPALTEIA.....NSQKKPLVIAEDVDGEALSTLVNRLKVG
EGHSP60GN_205 IQOILPVLEHI.....AKANRPLVIAEDVDGEALSTLVNRLKVG
HS60 SCHPO_222 VQDILPSLEIA.....AQORRPLVIAEDVDGEALSTLVNRLKVG
S61295_198 IHTILPALNHV.....VGTGRPLVIAEDVDGEALSTLVNRLKVG
TRBMTHSP_198 IHTILPVLNHV.....VSGRPLVIAEDVDGEALSTLVNRLKVG
#ENHCPN60F_142 SQSVVPALLELC.....LKRKPLVVISDTIDGALTTLVNLKRG
CH60 PLAFG_257 IQSILPILFIFAKNKQPLCIADDESNEVLQTLINKLKGAIKVLCIVTNSKYISADVGLDNLHNNSMSSFD
CH60 MYCGE_189 IKEILPLEGS.....VENGNPLVIAEDVDGEALSTLVNRLKVG
HTOHSP60X_228 VQDILPALTEAS.....TTLRRPLVIAEDVDGEALSTLVNRLKVG

FIG. 9(e)